

## PSF-1.5cst Dielectric Silicone Fluid

**Dielectric Strength: 350 volts/mil Operating Temperature Range: -70°C to 120°C closed system only**



*PSF-1.5cst Dielectric Silicone Fluid is an excellent fluid for applications that require low temp stability and high dielectric strength.*

**PSF-1.5cst Dielectric Silicone Fluid** is a clear, colorless and odorless low-viscosity linear PDMS Silicone / Polydimethylsiloxane (CAS # 63148-62-9) with a viscosity of 1.5cSt @ 25°C. **PSF-1.5cst Dielectric Silicone Fluid** is characterized by its high dielectric strength, low pour point, low temperature stability, wide service temperature range, low viscosity change at temperature (low V.T.C.), low surface tension, long service life, and hydrophobic nature (insoluble in water).

**PSF-1.5cst Dielectric Silicone Fluid** has a dielectric strength of 350 volts/mil and a dielectric breakdown strength (2.5mm)  $\geq 35$ kV. **PSF-1.5cst Dielectric Silicone Fluid** has an operating service temperature range of -70°C to 120°C (closed system\*).

**PSF-1.5cst Dielectric Silicone Fluid** has a Thermal Conductivity value of 0.10 W/m sec °C. Its specific heat value is 1.8 J/g °C @ 25°C.

**PSF-1.5cst Dielectric Silicone Fluid** has a low viscosity-temperature coefficient or V.T.C. (viscosity @99°C  $\div$  viscosity @ 38°C). The lower the V.T.C., the lower the viscosity will be at lower temps. Thus, its viscosity will not increase significantly even at extremely low temperatures.

### Features

- Low viscosity PDMS Silicone Oil
- Low Pour Point
- High Dielectric Strength
- Low viscosity change at temp
- Low Temperature heat transfer fluid
- High Compressibility
- Insoluble in water
- Compatible with virtually all O-rings, gaskets, valves and seals \*

\*Not recommended for silicone O-rings where the fluid may cause swelling

### Dielectric Properties

Dielectric Properties	
Dielectric Strength .....	350 volts/mil
Dielectric breakdown strength (2.5mm).....	$\geq 35$ kV
Dielectric Constant (50Hz).....	2.39 @ 25°C
Dielectric Constant (100Hz).....	2.36 @ 25°C
Dielectric Constant (100Hz).....	2.04 @150°C
Dissipation Factor (100Hz)	
@ 25C.....	0.0004
@ 150C.....	0.0004
Volume Resistance (ohm-cm)	
@ 25°C.....	$5.0 \times 10^{14}$
@150°C .....	$1.0 \times 10^{13}$

### Typical Product Data

Specific Gravity	Viscosity-Temp Coefficient	Flash Point	Boiling Point	Pour Point	Refractive Index	Thermal Expansion cc/cc °C	Thermal Conductivity W/m °C	Specific Heat J/g °C	Surface Tension
0.853	0.46	63°C	194°C	-90°C	1.3880	0.00134	0.10	1.8	18.0

### Typical Product Data (cont'd)

Boiling Point	Vapor Density (air = 1)	Vapor Pressure @ 25°C	Molecular weight
194°C	>1	1mmHg	340

### Viscosity/Temperature

Viscosity-Temp Coefficient (V.T.C.).....	0.46
Viscosity @25°C.....	1.5cSt
Viscosity	
@25°C.....	1.5cSt
@-25°C.....	3cSt
@-40°C .....	6cSt
@-60°C.....	<20cSt

### Packaging

1-gallon (3.78 liters) .....	3.2kg
5-gallon pail (18.9 liters) .....	16kg
55-gallon drum (208 liters) .....	150kg
Terms F.O.B. Phila, PA U.S.A.	

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